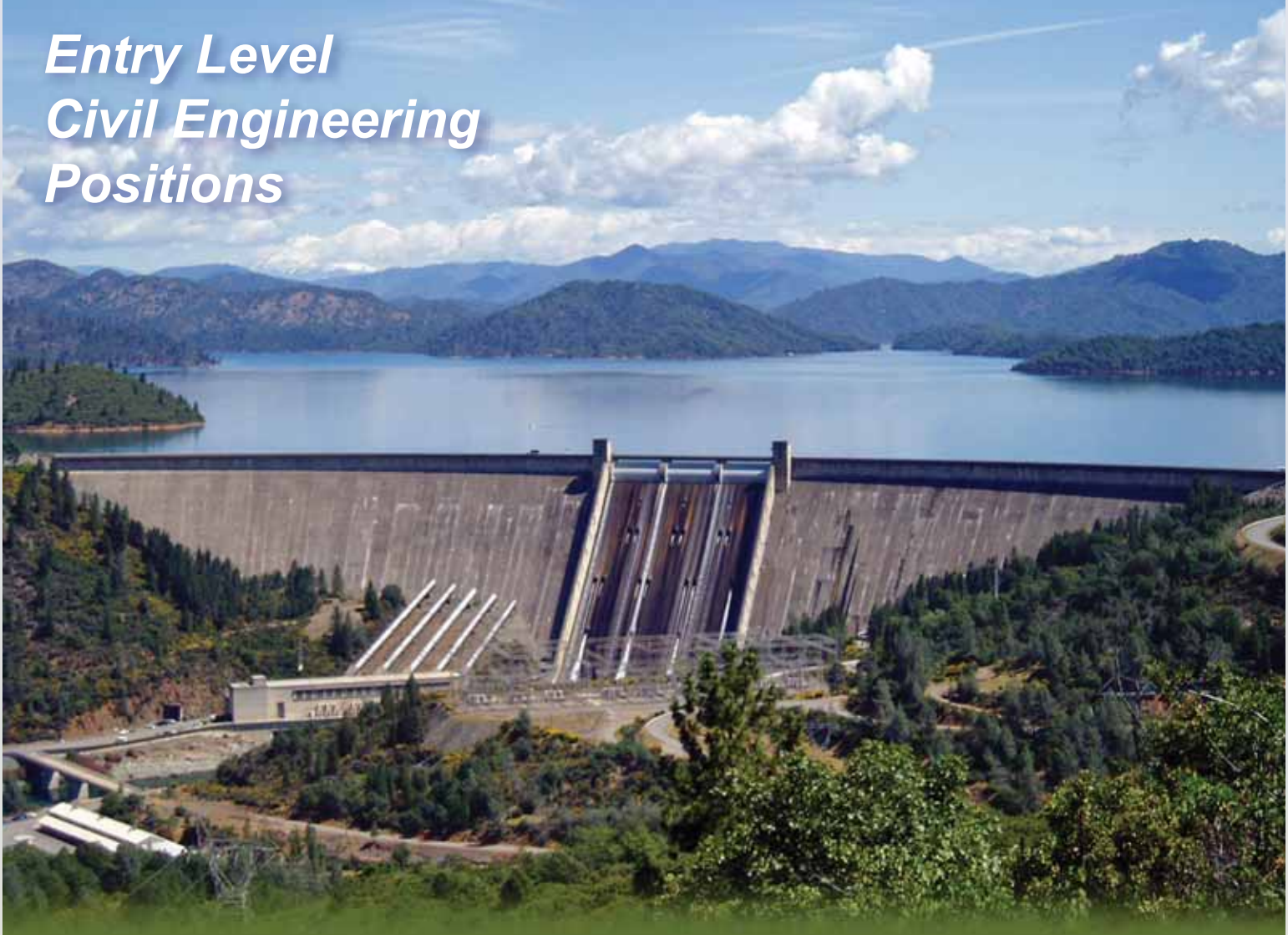
RECLAMATION

Managing Water in the West

Technical Service Center
Denver, Colorado

Entry Level
Civil Engineering
Positions



U.S. Department of the Interior
Bureau of Reclamation

Summer 2010

Civil Engineering Services Division

Plant Structures Group: this group is composed of civil, structural, and environmental engineers, architects, landscape architects, and civil engineering technicians. Duties include project management, coordinating and preparing planning studies, structural analysis and design, architectural and landscape design, analysis and design of water and wastewater treatment systems, and construction support services. http://www.usbr.gov/pmts/architecture/

Water Conveyance Group: this group provides engineering services for design and analysis of water conveyance systems, river improvements, roads, and bridges. Work includes irrigation and power canals and associated structures; transmission pipelines, pipe distribution systems, and pipeline control systems; tunnels, underground chambers, and shafts for all purposes; fish facilities (screens, ladders, and lifts); hydraulic transient analysis (open channel and closed conduit); water diversion structures; wetlands water conveyance features; and bridge design. http://www.usbr.gov/pmts/conveyance/

Estimating, Specifications, and Construction Management Group: this group provides numerous services from project conception through design and construction to project close-out. The group prepares Independent Government Cost Estimates (IGCE) at the appraisal, feasibility, percent design, prevalidation, engineers estimate, and contract modification levels. Duties include preparing or reviewing detailed cost estimates, providing support for negotiated procurement, and analyzing bids and proposals, and tracking cost indexes. http://www.usbr.gov/pmts/estimate/

Folsom Dam Project model, located in Reclamation's Hydraulics Lab, Building 56 on the Denver Federal Center. Bureau of Reclamation Photograph.

Materials Engineering and Research Laboratory (MERL) Group: this group provides specialized expertise on all engineering materials used to build Reclamation facilities. It provides a wide variety of services and assistance related to the testing, evaluation of engineering materials. The group is divided into seven teams that work in different areas: Corrosion Technology, Coatings Technology, Geosynthetics Technology, Concrete Technology, Concrete Repair team, Rock and Soil Testing, and Structural Testing and Evaluation. Special equipment includes a 5-million-pound universal large-scale testing machine, a vibration laboratory, and walk-in environmental and adiabatic test chambers. http://www.usbr.gov/pmts/materials_lab/

Water and Environmental Resources Division

Water Resources Planning and Operations Support Group: this group provides hydrologic engineering technical services to decision makers on water resources planning and management, reservoir and river systems operations, water supply issues, surface water and groundwater uses, hydrological watershed analyses, watershed hydrology, water conservation planning, water and land resource development, and suitability assessments. The group also develops and applies innovative methods for water resource investigations, including computer modeling systems, analysis tools, and integrated data management systems. http://www.usbr.gov/pmts/water_use/

Environmental Applications and Research Group: conducts environmental studies for dam operations, fish passage, fish evaluations and impacts on operations, compliance hazardous waste cleanup, irrigation and drainage systems, wetlands restoration, construction activities, and land use management. The staff is expert in evaluating anadromous and resident fisheries, waterfowl and raptors, wetlands and riparian habitats, limnology, and desert ecosystems. http://www.usbr.gov/pmts/eco_research/

The Water Treatment Engineering Research Team researches and designs desalination, water treatment, and wastewater treatment systems. These systems remediate water containing hazardous chemicals and compounds to meet current and quality requirements for water reuse or discharge. The team's work includes researching pretreatment techniques, chlorine resistant membranes, concentrate disposal techniques, renewable energy related to treatment, methods for reducing fouling, reducing operation and maintenance costs, and identifying and resolving environmental issues. http://www.usbr.gov/pmts/water/

Engineers examine Zebra and Quagga mussel invasion of the penstock gate at Davis Dam. Bureau of Reclamation Photo.

Sedimentation and River Hydraulics Group: this group conducts studies on how rivers and reservoirs have or will respond to changes in river flow, sediment supply, or channel modification. Studies are prepared for a variety of purposes including operation and maintenance, dam safety, and fish and wildlife habitat restoration. Many studies focus on Reclamation facilities; their physical impact on river channels and endangered species habitat, recreation, wetlands, and cultural resources. http://www.usbr.gov/pmts/sediment/

Flood Hydrology and Emergency Management Group: this group specializes in technical investigations, designs, reviews, and related work in flood hydrology and hydrometeorology. The group provides meteorological expertise, to help develop solutions for reservoir and flood control operations, evaluation and maintenance of aquatic habitat, hydroelectric power operations, storage allocation, water delivery and irrigation, water conservation, and river system optimization. http://www.usbr.gov/pmts/flood/

Geotechnical Engineering Division

Embankment Dams and Geotechnical Engineering Groups 1, 2, and 3: these three subgroups provide cost-effective geotechnical studies and analyses for embankment dams and a wide range of other water resource and environmental mitigation projects. The groups perform dam safety evaluations, including probabilistic risk analysis, for over 300 high and significant hazard embankment dams in Reclamation's current inventory, many of which are over 50 years old. The groups also provide design support services for dam safety modifications to Reclamation and other agency dams resulting from these and other agencies dam evaluations. http://www.usbr.gov/pmts/geotech/

A BOR geologist maps progress inside the upstream tunnel, Ridges Basin Dam Outlet Works, Animas-La Plata Project. Bureau of Reclamation Photo.

Engineering and Scientific/Technical Opportunities

Federal Career Intern Program (FCIP)

This program is designed to help agencies recruit and attract exceptional individuals into a variety of occupations. Created under Executive Order 13162, it is intended for positions at GS-5, 7, and 9, or other trainee positions. Generally, individuals are appointed to a 2 year internship. Upon successful completion, the interns may be eligible for permanent placement within Reclamation.

The following opportunities are available at the Technical Service Center located in Denver/Lakewood, Colorado.

- **Civil Engineer (Geotechnical and Hydraulic) GS-0810 series**

We can offer competitive salaries based on your experience and education level.
Current salary rates are available at the Web Site: http://www.opm.gov/oca/payrates/

Benefits

New permanent employees, as well as SCEP and FCIP appointees, are immediately eligible for annual and sick leave, as well as health and life insurance coverage (see right). STEP students are considered temporary employees and are not entitled to these benefits.

- 10 paid holidays a year
- 2 ½ weeks of annual leave per year
- 2 ½ weeks of sick leave per year
- Family and medical leave
- Paid military, jury, and bereavement leave
- Life insurance
- Retirement/Thrift Savings Plan (TSP)
- Health/dental/vision insurance

Check Us Out

To learn more about the Bureau of Reclamation, visit our Web Site at http://www.usbr.gov

To learn more about the TSC, visit our Web Site at http://www.usbr.gov/pmts/tech_services/about/index.html

For weekly updated Federal employment listings, see http://www.usajobs.opm.gov. All current Reclamation and TSC job openings are listed on this Web Site.

Other Government student employment and internship opportunities are posted on the World Wide Web at: http://www.studentjobs.gov

For consideration for FCIP positions send your resume and university transcripts to the address below by **Monday, July 19, 2010**
(all applicants should indicate ***"TSC Intern"*** on the top of their resumes):

Bureau of Reclamation
Human Resources Office
Attn: Lynn Petersen
P.O. Box 25007, (84-58200)
Denver, CO 80225-0007

For more information contact:

Ms. Lynn Petersen
Phone: (303) 445-2663
Fax: (303) 445-6349
E-Mail: LPetersen@usbr.gov

Who We Are, and Why Work For Us?

Created in 1902, the Bureau of Reclamation is a water management agency striving to assist in meeting the increasing water demands of the West, while protecting the environment. Reclamation is best known for the construction of dams, power plants, and canals in the 17 western states, including Hoover Dam on the Colorado River, Grand Coulee Dam on the Columbia River, and Shasta Dam on the Sacramento River. Today, we are the largest wholesaler of water in the country and the second largest producer of hydroelectric power in the western United States, generating nearly a billion dollars in power revenues.

The Bureau of Reclamation's mission is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public. We emphasize fulfilling water and power delivery obligations, ensuring water conservation, recycling and reuse, developing partnerships with our customers, municipalities, states, and North American Indian tribes, and discovering ways to bring together a variety of interests to address competing needs for our limited water resources.

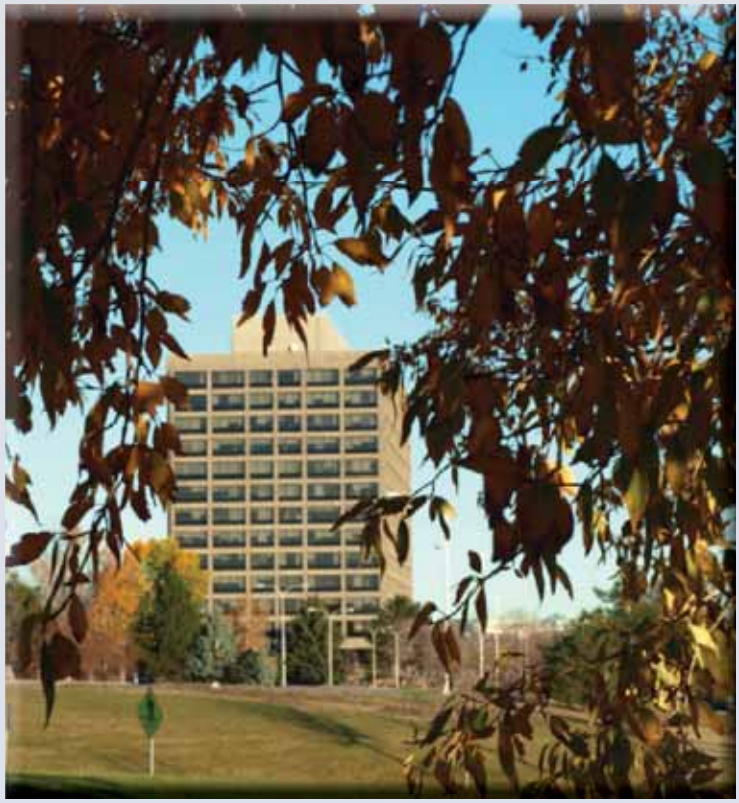
Jackson Lake Dam, just one of Reclamation's many Dams, located in Jackson, Wyoming. Bureau of Reclamation Photograph.

The Technical Service Center

The Bureau of Reclamation's Technical Service Center (TSC) is located in Lakewood, Colorado, on the west side of the Denver metropolitan area in a complex known as the Denver Federal Center. Created in 1994, the TSC is an engineering, science, research, and support center for projects related to water resources, and provides specialized expertise to Reclamation's programs, regions, other Federal agencies, and international customers. The TSC maintains a broad range of water resource management capabilities, from designing dams and powerplants to studying aquatic plants; the sharing of scientific and technical expertise in the development and conservation of water resources has long been a fundamental practice of Reclamation.

Currently, the TSC has four service divisions: Civil Engineering, Water and Environmental Resources, Geotechnical Engineering, and Infrastructure. We would like to invite you to join our staff, to help us fulfill our mission. Reclamation understands that a diverse workforce that reflects the American public is essential to meet future challenges. Therefore, we seek a variety of people with fresh ideas and outlooks, especially engineers and scientists, and invite students to explore our many internships and employment programs.

The following are brief overviews of each TSC division and their groups, web links that can provide more detailed technical information on each group's activities, capabilities, and services, and current job openings. Some groups also employ specific teams within; brief descriptions and web links are also included.



Technical Service Center located in Building 67, northwest corner of the Denver Federal Center. Bureau of Reclamation Photograph.